

WHAT IS CLAIMED IS:

1 1. In an integrated circuit wireless communication device having at least two
2 wireless transceiver circuits, a method for coordinating potentially conflicting wireless
3 communications, comprising:

4 assigning first and second priority indications to first and second wireless
5 transceiver circuits, respectively, where each priority indication may be selected from a
6 plurality of available priority indications;

7 receiving or transmitting data on the first wireless transceiver circuit in
8 accordance with the relative priority of the first priority indication to the second priority
9 indication;

10 detecting a predetermined application that configured to receive or transmit data
11 on the second wireless transceiver circuit;

12 assigning a third priority indication to the second wireless transceiver circuit
13 when the predetermined application is detected; and

14 receiving or transmitting data on the second wireless transceiver circuit in
15 accordance with the relative priority of the third priority indication to the first priority
16 indication.

1 2. The method of claim 1, wherein the first wireless transceiver circuit
2 comprises a MAC layer module that is directly coupled to a MAC layer module of the
3 second wireless transceiver circuit such that a priority indication may be transferred
4 between the MAC layer modules.

1 3. The method of claim 1, wherein the third priority indication is a maximum
2 priority indication that is available from the plurality of available priority indications.

1 4. The method of claim 1, wherein the third priority indication is greater than
2 the second priority indication.

1 5. The method of claim 1, wherein the second wireless transceiver circuit
2 comprises a Bluetooth application, and the predetermined application comprises a Human
3 Interface Device driver.

1 6. The method of claim 1, wherein the receiving or transmitting data on the
2 second wireless transceiver circuit in accordance with the relative priority of the third
3 priority indication to the first priority indication comprises receiving or transmitting data
4 on the second wireless transceiver circuit if the third priority indication has a higher
5 priority than the first priority indication.

1 7. The method of claim 1, wherein the first priority indication comprises a
2 user-specified priority indication for the first wireless transceiver circuit, such that the
3 first wireless transceiver circuit is given priority in the reception or transmission of data
4 relative to the second wireless transceiver circuit.

1 8. The method of claim 1, wherein the first wireless transceiver circuit
2 comprises a WLAN wireless interface device, and wherein the second wireless
3 transceiver circuit comprises a Bluetooth wireless interface device.

1 9. The method of claim 1, wherein the first wireless transceiver circuit
2 comprises a first Bluetooth wireless interface device, and wherein the second wireless
3 transceiver circuit comprises a second Bluetooth wireless interface device.

1 10. The method of claim 1, wherein the first wireless transceiver circuit is
2 compliant with Bluetooth and the second wireless transceiver circuit is compliant with
3 IEEE 802.11(b) or IEEE 802.11(g).

1 11. An apparatus for coordinating wireless communications, comprising:
2 a first wireless interface circuit for performing receiving or transmitting
3 operations of a first type of wireless communication having a first priority level selected
4 from a first plurality of priority levels;
5 a second wireless interface circuit for performing receiving or transmitting
6 operations of a second type of wireless communication having a second priority level
7 selected from a second plurality of priority levels;
8 an interface coupling the first and second wireless interface circuits for
9 transmitting priority levels between the first and second wireless interface circuits; and
10 a controller for coordinating the operations of the first or second wireless interface
11 circuits in relation to a relative priority of the first and second priority levels, said
12 controller comprising priority level adjustment logic for adjusting a priority level in
13 response to detecting a predetermined condition.

1 12. The apparatus of claim 11, wherein the first wireless transceiver circuit is
2 compliant with Bluetooth and the second wireless transceiver circuit is compliant with
3 IEEE 802.11.

1 13. The apparatus of claim 11, wherein the controller comprises a MAC layer
2 module.

1 14. The apparatus of claim 11, wherein the controller comprises a first MAC
2 layer module in the first wireless interface circuit and a second MAC layer module in the
3 second wireless interface circuit.

1 15. The apparatus of claim 11, wherein the predetermined condition comprises
2 a request to receive or transmit real time data over the second wireless interface circuit.

1 16. The apparatus of claim 11, wherein the predetermined condition comprises
2 real-time human interface device (HID) traffic being transmitted or received on the
3 second wireless interface circuit, and wherein the priority level adjustment logic
4 increments the second priority level.

1 17. The apparatus of claim 11, wherein the predetermined condition comprises
2 a user-specified priority level being entered for the second wireless interface circuit, and
3 wherein the priority level adjustment logic increments the second priority level above the
4 first priority level in response to detecting the user-specified priority level.

1 18. The apparatus of claim 11, wherein the predetermined condition comprises
2 audio-video traffic being transmitted or received on the second wireless interface circuit,
3 such that the controller protects the second wireless interface circuit from interference
4 caused by the first wireless interface circuit by adjusting the second priority level to a
5 maximum level and adjusting the first priority level to a minimum level.

1 19. An apparatus for implementing a dynamic collaboration protocol,
2 comprising:

3 first means for sending or receiving a first wireless signal having a first allocated
4 priority, comprising a first MAC layer module;

5 second means for sending or receiving a second wireless signal having a second
6 allocated priority, comprising a second MAC layer module;

7 means for adjusting the second allocated priority to be higher than the first
8 allocated priority if real-time human interface device (HID) traffic is detected on the
9 second means; and

10 means for interfacing the first and second MAC layer modules to coordinate
11 throughput performance of the first and second means such that whichever of the first or
12 second means has a higher allocated priority is given higher throughput performance.

1 20. The apparatus of claim 19, wherein the second wireless signal comprises a
2 packet signal, and wherein the means for adjusting the second allocated priority evaluates
3 each packet of the packet signal to detect if real-time human interface device (HID)
4 traffic is present on the second means.